

Notice of Allowability

Application No.

10/782,545

Examiner

Howard E. Abramowitz

Applicant(s)

ROSCHEISEN ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendments to the claims filed 2/8/06.
2. ☒ The allowed claim(s) is/are 2-5, 14-23 and 35-48.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/8/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

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An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Hao Tung on 3/28/06.

The application has been amended as follows:

Claims 22 and 35 have been amended as follows:

22. (currently amended) A method for treating a substrate surface, the method comprising:

coiling one or more substrates into one or more coils in such a way that adjacent turns of the coils do not touch one another;

placing the one or more coiled substrates in a treatment chamber; and in the treatment chamber, treating substantially an entire surface of the one or more coiled substrates with a surface treatment process,

wherein the surface treatment process includes one or more atomic layer deposition (ALD) reactions,

wherein coiling one or more substrates includes attaching two substrates together back-to-back to form a dual substrate and coiling the dual substrate.

35. (currently amended) The method of claim 2 wherein the surface treatment creates a continuous layer by using a self-limiting surface reaction on at least one side of the substrate from one adjacent turn to another.

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The following is an examiner's statement of reasons for allowance: The claims of the current application are not taught in the prior art, the concept of performing ALD on an elongated substrate was only found using a reel-to-reel device in patent application No. 2005/0172897 where a plastic substrate had a barrier coating applied. The concept of coiling an elongated substrate in order to treat the entire surface was taught in US Patent 3,923,556 and US Patent Application No. 2004/0001922, however both of these patents were drawn to treating metallic substrates neither of which dealt with atomic layer deposition but rather heat treating and a bath coating process respectively. Accordingly, one of ordinary skill would not see motivation to combine a reference teaching coiling a metal substrate for heat treatment or bath coating metal with a reference for ALD coating a plastic substrate as they are non-analogous art as there is no suggestion that the plastic substrate of 2005/0172897 would be operable in the coiling processes disclosed in 3,923,556 and 2004/0001922 or that ALD would be operable in such a configuration.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance." Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard E. Abramowitz whose telephone number is 571-272-8557. The examiner can normally be reached on monday-friday 9:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER